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## CURRENT SUPPORT MEMORANDUM

COMMUNIST CHINA TO INTRODUCE REINFORCED  
CONCRETE RAILROAD TIES IN 1958

OFFICE OF RESEARCH AND REPORTS

CENTRAL INTELLIGENCE AGENCY

This report represents the immediate views of the  
originating intelligence components of the Office  
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CONCRETE RAILROAD TIES IN 1958

The Communist Chinese Ministry of Railroads has announced that it will produce one million steel-reinforced concrete ties in 1958 for use in railroad construction. 1/

The large-scale introduction of reinforced concrete ties during 1958 would help ease the lumber shortage currently plaguing the Chinese. In 1957 more than 10 million ties were used in all types of railroad construction--taking more than 10 percent of the national production of lumber. 2/ Figuring 1,800 ties to a kilometer of railroad construction, one million ties will suffice for more than 550 km of track and will save about 165,000 cubic meters of lumber. A statement by the Chinese, "There are still some operational questions preventing the introduction of reinforced concrete ties on the new railroad lines" 3/, indicates that experimentation is continuing on such ties. Meantime, they will probably not be used on other than spur, branch, and station lines.

Wooden ties cost from nine to 14 yuan apiece and reinforced concrete ties from 17 to 20 yuan apiece. 4/ The life of reinforced concrete ties, however, is two to three times that of wooden ties and maintenance costs are about 25 percent less. 5/ Their longevity would greatly reduce the number of deteriorated wooden ties to be replaced annually.

The use of reinforced concrete ties is at least 50 years old. Hungary and West Germany, particularly, have made considerable use of them. Relatively little track has been laid on reinforced concrete ties in China. The USSR began producing this type of tie in 1955 and the original goal for the Sixth Five-Year Plan (1956-60) was 10 million ties. 6/ Technical difficulties in the production process, however, have led to a downward revision of the goal to four million ties. 7/ Poor Soviet performance in 1956 and 1957, coupled with the revised plan, suggests that the Chinese too will have difficulty in producing the planned one million reinforced concrete ties in 1958, their first year of production.

Buttressing this belief is the statement by the Chinese that two of the three permanent factories being established for production of reinforced concrete ties "may" go into production in 1958. 8/ By the end of 1959 these plants and four temporary ones are scheduled to produce 2.2 million to 2.5 million prestressed reinforced concrete ties annually, but, again, based on Soviet experience, this figure seems optimistic.

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Analyst:

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Sources:

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2. Ibid., Summary no 1370, 18 Jun 57, p. 39, C
3. State, Hong Kong, Extracts from China Mainland Magazines,  
no 108, 25 Nov 57, p. 30, U
4. Ibid.
5. CIA. FDD Summary no 1637, op. cit.
6. Gudok, no 32, 8 Feb 56, p. 3, U
7. Ibid., 14 May 57, p. 3, U
8. CIA. FDD Summary no 1637, op. cit.

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